



2021

City of Bothell's Water Quality Education Programs

Annual Summary

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Prepared for



Surface Water Division
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Description and purpose

The City of Bothell's Water Quality Education Program continues to educate students about pollution prevention, stormwater quality, and watershed ecosystem health. Students that participate in these workshops learn how natural water systems keep water healthy, how human built water systems interact with these natural systems, and what they can all do to be good stewards of our watersheds. This program is helping to create awareness and foster sustainable practices and behaviors in the City of Bothell.

During a typical calendar year, Nature Vision conducts a three-tiered evaluation strategy to determine student retention of information, understanding, and teacher satisfaction



over time. Because remote and/or hybrid learning made it difficult to measure students' level of understanding about the stormwater lessons they received, the City did not ask Nature Vision to complete a program evaluation for 2021. COVID-19 caused too many deviations in

the steps necessary to properly evaluate the program, so the data collected would not have been representative or complete. Instead, staff requested a brief program summary for 2021, including feedback from participating teachers.

Evaluation goals and methods

During a typical school year that included evaluation methods, here are the goals and methods Nature Vision would use to evaluate the effectiveness of its programs.

Goal 1: Student retention

To evaluate the retention of lessons in short-term and long-term student memory (short-term immediately following the lessons, long-term after 60 days).

- **Method 1** – select classroom surveys for grades 3-12 (to account for reading levels)
- **Method 2** – follow-up surveys after 60 days when applicable
- **Method 3** – student letter analysis (when letters are more than simple thank-you letters)
- **Method 4** – select student responses to essay questions

Goal 2: Teacher satisfaction

To evaluate how the program is received by teachers (i.e., are the workshops helping teachers meet state and local education standards and therefore desired by teachers as a teaching resource).

- **Method 5** – post-workshop email survey

Goal 3: Agency goals met

To evaluate how Nature Vision can more directly meet City of Bothell's goals within NPDES permit and budget parameters.

- **Method 6** – class observations (conducted by City of Bothell staff when school is in session, not included in this report)

Programs delivered and students reached in 2021

Under Bothell KCD funding, from 1/1/21-6/30/21 we taught 24 programs for 570 students. Under Bothell SNO funding, from 1/1/21-6/30/21 we taught 23 programs for 485 students. Total 1/1/21-6/30/21: 47 programs for 1055 students.

Under Bothell KCD funding, from 9/1/21-12/31/21 we taught 13 programs for 279 students. Under Bothell SNO funding, from 9/1/21-12/31/21 we taught 4 remote programs for 88 students. Total 9/1/21-12/31/21: 17 programs for 367 students.



In 2021, Nature Vision delivered **64 programs in for 1422 students** in 9 schools within City of Bothell, despite schools continuing to teach remotely for at least the first part of 2021.

Teachers are already registered for some winter/spring 2022 programs as well. We have 4 programs for 68 students under KCD funding scheduled from 1/1/22-6/30/22 and 7 programs for 153 students under

SNO funding scheduled from 1/1/22-6/30/22. Teachers are registering week by week this school year, so we expect to see these numbers increase from January forward.

Programs available

A list of City-sponsored water quality education programs available to Bothell students is available at <https://naturevision.org/free-programs-for-schools>.

In 2021, the top three most requested programs by Bothell teachers were:

- Salmon Cycle
- Watershed Ecosystems
- Water Cycle

Program costs

Nature Vision received \$5223.75 in sponsorship funds from City of Bothell for providing stormwater education programs in 2021 to schools within Bothell's city limits.

Feedback from teachers

Are there any improvements you would like to suggest? *I am thoroughly impressed with the program and Dandy's ability to connect with the students and answer their questions respectfully and thoroughly. Some of the activities were not appropriate for virtual learning so I created a choice document with activities students can do at home to investigate further -- playing with sieves, colanders, and coffee filters, recording observations of local wetlands or even just a garden spot noticing the layers.*

Would you like to see these programs in your school next year? *Yes*

Would you encourage this sponsor to fund this program next year? *Definitely!*

- Kirsten Jackson, Woodin Elementary

Are there any improvements you would like to suggest? *None that I can think of.*

Would you like to see these programs in your school next year? *YES!*

Would you encourage this sponsor to fund this program next year? *I love the salmon stuffed toys she used to present and the map for the activity.*

- Maria Hettle, Woodin Elementary

Hello, this lesson was very fun! The kids loved watching the video and it was great to see the puppets as well as real photos and videos of the salmon. I would love to do this again next year with my class. I appreciate you putting this together and it was a perfect lesson to go with our cycle science unit.

- Ashley Amundsen, Westhill Elementary

Are there any improvements you would like to suggest? None. Visuals were clear and engaging and *presenter kept kids interested with effective questioning techniques.*

Would you like to see these programs in your school next year? *Yes, please!*

Would you encourage this sponsor to fund this program next year? *Yes!*

- Christy Deer, Canyon Creek Elementary

Dear Sarah and Maureen,

Thank you so much for joining our classrooms and sharing important lessons about our watershed and our role in preserving the watershed. Our students loved the experiments and the animal bones that you shared with us. A few students even filtered water at home trying to replicate the example that you showed. Thank you for raising our awareness of the necessity of these areas in our communities and of the care we need to give them. We appreciate having your classes in our schools especially with this crazy year. It was fun to look forward to science on Fridays.

- Mrs. Deer, Ms. Mahoney, Mrs. Wheeler, Canyon Creek Elementary

Would you like to see these programs in your school next year? *Yes! Our students really enjoy Nature Vision programs. I like the amount of time the activity takes, and it helps the students connect with what they are already learning about ecosystems in class.*

Would you encourage this sponsor to fund this program next year? *My students are using the activity to connect to our lesson on decomposers now. They are using the information from the PowerPoint and their observations to explain the importance of decomposers in a food web and throughout an ecosystem.*

- Erin Wells, Shelton View Elementary

My kids had a BLAST with you guys this week! And we wanted to say thank you!!! Most of the kids have made thank you "cards".

Here is the link to the Google Drive Folder that has them all in there! If you start at the beginning it will be like a big thank you book! 😊

Thank you again for such fun and engaging learning!!! We will be signing up FOR sure of next school year!!!

- Shannon Kelly, Frank Love Elementary

Are there any improvements you would like to suggest? *The video that Michelle does needs visuals, photos or videos from the community, something that kids can relate to and get excited about, with less camera movement. She has some important information that can impact our community for generations, however kids began tuning out.*

Would you like to see these programs in your school next year? *YES!!! especially the option for zooms and asynchronous programs. This is a wonderful program that gets kids excited about taking care of our communities and ALL that live here. The younger they are and the more frequent we can expose kids to these important aspects of keeping our water clean and caring for all that rely on it, the better chance we have at influencing the next generations to take clean water seriously.*

Please share any special stories or examples of how this program helped your students gain awareness, understanding, or appreciation of ecological concepts.

My students did not know there were so many amphibians right here in Bothell or that Bright Water was a cool place to go and explore. I am looking forward to field trips to Bright Water and Nature Vision again. My kids were able to connect their learning to a story over social media where a local resident stopped and helped a newt off of the road, in hopes of saving more from being run over and to raise awareness. That story was in Woodinville and it posted a few days after Sara came to our class. It was perfect!

Would you encourage this sponsor to fund this program next year? *YES, I would encourage the City of Bothell to continue to sponsor and support this program. With the growth that Bothell is having, this program is necessary. Our community deserves clean water, forests and local education. The best thing we can do is educate the young, so that sustainability continues to be forward thinking and not a wish.*

- Terise Waters, Northshore Virtual Program



Screenshot of electronic "thank you" notes to Nature Vision from 2nd grade students at Frank Love Elementary, spring 2021